

ELECTRONIC TUBE REFERENCE

20GP4

Specialized - Cathode Ray electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
CATHODERAY

Twenty-inch direct-view television picture tube with electrostatic focusing and magnetic deflection. Its P4 white screen operates with an anode rating around 14 kV for monochrome receiver display.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	12
NOMINAL HEATER	6.3 V / 600 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Cathode Ray	
MAXIMUM PLATE VOLTAGE	14000 V
MAXIMUM SCREEN VOLTAGE	500 V
CRT section; Electrostatic focus with magnetic deflection.	

Direct-view television picture tube with electrostatic focus, magnetic deflection, P4 white phosphor, and published high-voltage CRT operating data.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1961 Tung Sol

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1961 TUNG SOL

Section 1 · Cathode Ray

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Nominal
Heater current	600 mA	Nominal
Grid 2 voltage	500 V	Published CRT data

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Deflection angle	1 deg	Published CRT data



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1966 Tung Sol Electronic Tubes 4 of 4

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1966 TUNG SOL ELECTRONIC TUBES 4 OF 4

Section 1 · Cathode Ray

CONSTRUCTION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Focusing method	Electrostatic	—
Deflecting method	Magnetic	—
Phosphor	P4	White

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Horizontal deflection angle	66 deg	Approximate
Diagonal deflection angle	70 deg	Approximate
Persistence	Short	—
Faceplate light transmission at center	66 %	Approximate

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode to all other electrodes capacitance	5 pF	Approximate
Grid #1 to all other electrodes capacitance	6 pF	Approximate

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	600 mA	—
Maximum DC anode voltage	14000 V	—
Maximum DC grid #2 voltage	500 V	—
Maximum grid #1 negative bias magnitude	125 V	—
Maximum grid #1 positive DC bias	0 V	—
Maximum grid #1 positive peak	2 V	—
Maximum heater-cathode voltage during warm-up	410 V	HeaterNegative;Warmup<=15s
Maximum heater-cathode voltage after warm-up	150 V	HeaterNegative
Maximum heater-cathode voltage heater positive	150 V	HeaterPositive
Typical DC anode voltage	14000 V	TelevisionPictureTube
Typical DC grid #2 voltage	300 V	TelevisionPictureTube
Typical grid #1 visual-extinction range	-33 to -77 V	VisualExtinction
Ion trap setting	75 mA	Approximate

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum collector/grid #3/grid #5 voltage	14000 V	—
Maximum grid #4 voltage	3600 V	—
Typical collector/grid #3/grid #5 voltage	14000 V	—
Typical grid #4 focusing voltage range	2750 to 3740 V	—